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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/088,650

03/20/2002

Katsuhiko Hiramatsu

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7590

05/05/2006

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EXAMINER

CHO, UN C

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/088,650	Applicant(s) HIRAMATSU ET AL.	
	Examiner Un C. Cho	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-9 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. In view of the Appeal Brief filed on February 13th 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:


GEORGE ENG
SUPERVISORY PATENT EXAMINER

2. Applicant's arguments with respect to claims 6 – 9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 6 is objected to because of the following informalities:

Regarding claim 6, lines 11 – 12 recite, "... downlink CIR ... uplink CIR." it should be "... downlink Carrier-to-Interference Ratio (CIR) ... uplink CIR."

Instead.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Uchida et al. (US 6,590,878 B1).

Regarding claim 6, the admitted prior art discloses carrying out downlink channel assignment in the determined order in accordance with a downlink CIR and uplink channel assignment in accordance with an uplink CIR (see Fig. 2; the admitted prior art, Page 3, lines 2 – 13).

However, the admitted prior art as applied above does not specifically disclose a base station apparatus comprising: a timing deviation measurer that measures a reception timing deviation, said reception timing deviation being a time delay of an arrival time of a direct wave with respect to a slot start time, which is based on an internal clock; and a channel assigner that: (1) refers to a table indicating a range of reception timing deviation assigned to each of a

plurality of slots, (2) determines, by reference to the table, an order in which the slots are subjected to channel retrieval based on the measured reception timing deviation. In an analogous art, Uchida discloses a base station apparatus measuring time delay of a signal (Uchida, Col. 21, lines 21 – 40 and Col. 23, lines 46 – 50) and storing the information of the time delay in the memory in the base station and also in the memory in the mobile switching center (Uchida, Col. 23, lines 57 – 62) and a channel is allocated in the most proper time position of the time slot based on the information in the memory (Uchida, Col. 24, lines 7 – 10 and lines 23 – 51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Uchida to the system of the admitted prior art in order to provide a way of indicating the most proper time of the time slot to each of the mobile stations to establish an efficient synchronization within the wireless system.

Regarding claim 7, admitted prior art in view of Uchida as applied above discloses wherein the channel assigner compares an uplink CIR and downlink CIR of a selected slot to a predetermined threshold value; assigns a call to the selected slot when the uplink CIR and downlink CIR of the selected slot are both greater than the predetermined threshold value; selects slots in sequence in a direction of less reception timing deviation when at least one of the uplink CIR and downlink CIR of the selected slot is less than the predetermined threshold value and in a direction of greater reception timing deviation when there is no slot

of less reception timing deviation; and carries out the channel retrieval using the slots (the admitted prior art, Page 3, lines 2 – 24).

Regarding claim 8, the claim is interpreted and rejected for the same reason as set forth in claim 6.

Regarding claim 9, the claim is interpreted and rejected for the same reason as set forth in claim 7.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hayashi (US 6,765,894 B1) discloses channel assignment based on delay profile.

Oksala (US 6,477,151 B1) discloses a method of synchronizing radio signal transmission slots at a mobile station.

Terry (US 7,023,835 B2) discloses synchronization of timing advance and deviation.

Vallstrom et al. (US 6,804,212 B1) discloses a method and arrangement for establishing a connection between a base station and mobile station.

Yahata et al. (US 6,480,483 B2) discloses frame synchronization system between base station of mobile radio communication system and base station device employing this system.

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Nemoto (US 7,006,534 B1) discloses radio communication system and method for calculating transmission timing between a terminal unit and a base station based upon location, distance or propagation time.

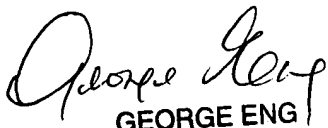
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C. Cho whose telephone number is (571) 272-7919. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Un C Cho
Examiner
Art Unit 2617

4/28/06 ce


GEORGE ENG
SUPERVISORY PATENT EXAMINER